## Project Introduction

Satellite design encompasses a multitude of steps from concept to flight, which can take several years, depending on the scope, requirements and budget of the mission. The process also requires a wide range of design and management tools, with limited consistency and data interchange capability. Detailing the relationships between the satellite configuration (components and interrelationships), inventory control systems, life cycle management, design, analysis and test data is extremely difficult at best. No tool exists that meets these needs for the general satellite design, system engineering and integration process. Sci_Zone has begun development of our innovative Satellite Design Automation architecture QuickSAT

TM

, in conjunction with our step_SATdb open database architecture to meet this need. step_SATdb seamlessly integrates existing detail design tools with QuickSAT

TM

, as well as databases tracking requirements, hardware and software components and payloads in inventory, with the final configuration of the satellite. QuickSAT

TM

, provides for not only rapid design, via design wizards and integration to existing design tools, but will provide coherency between a range of applications and data sets. step_SATdb stores and distributes supporting satellite design, configuration, mission, support and test data from a centralized database server and can distribute the data across multiple platforms and via the internet.



step_SATdb, An Open Source Based Satellite Design Data Architecture with API Design and Management Plugins, Phase II
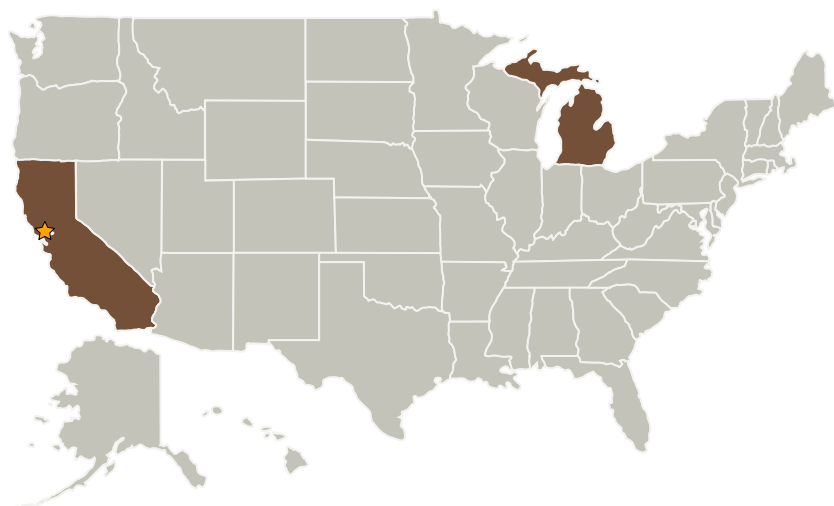
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## Primary U.S. Work Locations and Key Partners



| Organizations Performing Work | Role | Type | Location |
|---|---|---|---|
| ⭐Ames Research Center(ARC) | Lead Organization | NASA Center | Moffett Field, California |
| sci_Zone, Inc. | Supporting Organization | Industry Women-Owned Small Business (WOSB) | Holland, Michigan |

| Primary U.S. Work Locations | |
|---|---|
| California | Michigan |

## Project Transitions

▶ **February 2009:** Project Start

✓ **February 2011:** Closed out

## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**

Ames Research Center (ARC)

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

## Technology Areas

**Primary:**

- TX11 Software, Modeling, Simulation, and Information Processing
  └ TX11.5 Mission Architecture, Systems Analysis and Concept Development
    └ TX11.5.2 Tools and Methodologies for Performing Systems Analysis